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THE EFFECTIVENESS OF PHONEMIC AWARENESS INSTRUCTION TO EARLY READING SUCCESS IN KINDERGARTEN

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This study investigated the effects of phonemic awareness instruction to early reading success in Kindergarten students. The researchers used students from their classroom and provided phonemic awareness instruction on a daily basis, as well as interventions to those who struggled in certain areas of instruction. Participants took the MAP test and were given the Fountas and Pinnell reading benchmark assessments. Their scores were compared to record any gains from September and again in December. The purpose of the research was to determine if struggling students would show growth and close the academic gap with those students who enter Kindergarten and are strong in phonemic awareness in their progression towards early literacy and reading abilities by receiving direct phonemic awareness instruction in small and large groups. The data showed that most students entered Kindergarten with a high understanding of phonemic awareness and that those students who struggled and had lower scores showed a gradual improvement in closing the academic gap with those students who were strong in phonemic awareness as they progressed towards early literacy and reading abilities.

Keywords: Phonemic Awareness Instruction, Kindergarten, Early Reading.

The Problem and Its Background

Some children will enter a classroom with a variety of experiences that will help them to read and comprehend exactly what they have read. Other students will enter a classroom with limited academic experiences and because of outside circumstances, may struggle in their efforts to become a fluent reader. Knowing this general information, teachers must then use whatever background experiences their students have and utilize tools that we have available in order to tap into their abilities and scaffold their transition into reading. In order to do this, a clear understanding of ways that work best for individual children in the beginning and most critical years for learning is important, so that our students are able to become successful readers. An essential tool used in classrooms to enhance the reading abilities of children are phonemic awareness lessons. Multiple lessons and activities in phonemic awareness are available for teachers to use that provide engaging opportunities for students to learn about manipulating, blending and segmenting sounds to assist in later reading abilities. The early literacy success of young children is very important to the success they will have later as they progress through grade levels. Studies have shown that, for young students just beginning to read, phonemic awareness is a critical skill necessary for reading success.

The International Reading Association (1998) reported that psychologists noticed that children who had difficulties reading struggled with the sounds in words and how to blend those

sounds together to make words. Research continued for over 50 years regarding the relationship between the awareness of sounds and the ability to read (International Reading Association, 1998). Yeh and Connell (2008) defined phonemic awareness as the ability to recognize that spoken words are made up of a set of phonemes. A phoneme is the smallest part of speech that affects the meaning of a word. In the word hat, the/ *h/* is the phoneme. Heggerty (2005) points out that phoneme awareness is different than phonics because it involves the use of auditory skills to teach students to isolate, manipulate, blend and segment sounds without the use of print. Phonics refers to the association of sounds to written symbols, like learning the alphabet. Put simply, phonemic awareness entails students understanding that words are composed of sounds and goes beyond the basics of just acknowledging letters and the sounds of those letters. Nevertheless, the National Reading Panel, as reported in an article by Donald Langenberg (2000), suggests that phonics and phonemic awareness should be integrated together within the curriculum in order to enhance reading fluency and comprehension skills.

Yeh and Connell (2008) reported on several studies have been conducted to show that the skills learned in phonemic awareness, such as segmenting and blending, assist with better overall reading comprehension abilities among young children and should be taught to children as young as 4 years old while in preschool. The current curriculum used in my Kindergarten classroom was created by Michael Heggerty, Ed. D, and is entitled Phonemic Awareness: The Skills they need to help them Succeed. It is a program that was created specifically for Kindergarten classrooms and is taught as explicit, whole group instruction (Heggerty, 2005). Yeh and Connell (2008) also point out that in some disadvantaged programs, such as Head Start that work with children and families between the ages of 3-5, some children are not developmentally ready to begin this program and should start with more activities that enhance their vocabulary and ability to rhyme.

The International Reading Association (1998) reported on studies conducted to show that acquiring the skills learned in phonemic awareness beginning when a child first attends school is the best predictor of reading success in later years. They suggest that based on different needs and strengths, some students may need more time and focused lessons on phonemic awareness, as well as other literacy skill building activities, in order to become successful readers (International Reading Association, 1998). In our school district, students took the Measures of Academic Progress (MAP) test. This test was used to measure academic growth throughout the school year and from year to year in the areas of reading, as well as mathematics. The Northwest Evaluation Association, or NWEA, (2010) reported that this assessment was developed in order to assist teachers in gaining more effective information about a students' needs and abilities in order to determine more appropriate groupings for students to provide differentiated instruction, designing curriculum, and providing for students individual needs. The reading assessment looked at early literacy and pre-reading behaviors in students, particularly Kindergarteners, in areas including phonological awareness, which includes specific phonemic awareness items, phonics, concepts of print, vocabulary and word structure, comprehension and writing. The MAP Reading assessment report included a Lexile score for each student, which was used as a guide to choose books at an appropriate independent reading level for each student.

After performing this assessment, as well as information from other teacher created assessments and observations, students are grouped together according to skill level. Those put into lower groups are those students who have demonstrated areas that they struggle with regarding phonics and phonemic awareness. This lower ability group receives more focused and intensive interventions to work on specific skills, such as letter identification, sounds, blending and segmenting. The specific question addressed in this study was can struggling students show

growth and close the academic gap with those students who enter Kindergarten and are strong in phonemic awareness in their progression towards early literacy and reading abilities by receiving direct phonemic awareness instruction?

The purpose of this study was to examine the effectiveness of phonemic awareness instruction to the development of early literacy and reading abilities in Kindergarten children. The rationale for conducting this study was to look for ways to improve the reading abilities of Kindergarten students by using phonemic awareness programs that are beneficial in accomplishing this goal. The research conducted with this study will benefit our instruction and enhance students learning as we seek to help our students develop early reading and literacy skills. We hope to increase the literacy skills of our students by addressing their individual needs with learning to read and create a strong basis for the future reading endeavors of our students as they progress through the grade levels.

Literature Review

Phonemic Awareness Defined

One of the essential tools used today to enhance the reading abilities of children is the development of phonemic awareness skills. Yeh and Connell (2008) defined phonemic awareness as the ability to recognize that spoken words are made up of a set of phonemes. A phoneme is the smallest part of speech that affects the meaning of a word. In the word hat, the/ *h/* is the phoneme. Phonemic awareness is a subset of the broader term of phonological awareness, which is a general awareness of spoken words being made up of sounds. Heggerty (2005) points out that phonemic awareness is different than phonics because it involves just using auditory skills to teach students to isolate, manipulate, blend and segment sounds without the use of print. Phonics refers to the association of sounds to written symbols, like learning the alphabet. Put simply, phonemic awareness entails students understanding that words are composed of sounds. Ultimately, the goal is to produce readers who are confident, fluent and focused on their reading, rather than on how to actually sound out and read the words.

The International Reading Association (1998) reported that psychologists noticed that children who had difficulties reading struggled with the sounds in words and how to blend those sounds together to make words. Hoover (2002) states that although students do not need to possess phonemic awareness in order to learn in general, it is a skill that is necessary to learn to read, especially languages that are alphabetic. This skill is necessary because in order to decode words, students must have an understanding of phonemes that are a part of the spoken word. Children from all backgrounds will struggle with reading, but if teachers provide engaging opportunities students to develop an awareness of sounds, letters and how to manipulate and play with those sounds to create phonemic awareness, then we can a stepping stone for the development of later reading success. The most critical step, however, is to identify through appropriate assessments those students who may be at risk for struggling with reading.

Identifying and Assessing Students at Risk

Students who enter kindergarten with little or no knowledge of letters or sounds struggle with developing early literacy skills and often fall behind their peers with developing these skills. These students tend to be labeled at risk for later development of reading and writing abilities.

Toregesen (2009) stated that most students who struggled in Kindergarten and 1st grade with important phonological skills, including knowing their letters, matching sounds to written words and having phonemic awareness (the ability to manipulate sounds, decoding) continue to struggle and are poor readers even in the fourth grade. He states that these students continue to "find it difficult… to read independently" (para. 2). Foorman and Torgesen (2001) state that the label of at risk may not be a permanent characteristic for some children, but those students will struggle because of a "mismatch between child characteristics and the instruction provided (p. 206). They state that students who are at risk struggle with reading at the same pace as students who have developed those early literacy skills and will require more individualized, intensive and explicit instruction in phonemic awareness (Foorman & Toregesen, 2001).

Yopp (1995) discussed the rise in research as it relates to phonemic awareness because of the correlations that are consistently found between a student's performance on phonemic awareness assessments and later reading abilities. She makes clear the point that phonemic awareness is not the single determining factor of literacy development, but does provide valuable information, along with other resources that teachers have available, to make predictions on their reading and spelling abilities (Yopp, 1995).

Torgesen (1998) reported that if students identified as at risk for reading failure are not provided with resources to assist with identifying and preventing poor reading abilities, they will continue to struggle in later grades. Those students will remain behind their peers in reading abilities, will need intensive interventions to increase their word reading skills and could eventually develop a negative attitude toward reading because of their performance (Torgesen, 1998). Research has shown that students needed more assistance when working with printed and oral language and overall had troubles with phonemic awareness and an inability to identify sight vocabulary that can be read fluently and automatically. Torgesen (1998) provides assessment tools that would assist in identifying young children who are at risk of reading failure and in need of support in the growth of early reading skills.

This qualitative report by Torgesen (1998) discusses the importance of ensuring that children acquire adequate reading comprehension skills. Poor readers will struggle with comprehension because they lack the ability to understand the alphabetic principle, or the understanding that words are composed of letters that represent sounds, to help determine words that are unknown (Torgesen, 1998). They are also slower to remember sight vocabulary words that they can read fluently. Too much time is spent on trying to figure out the words rather than comprehending the text of what they have read. Students can thus be given assessments that measure tasks that will help identify children at risk for reading failure. The most common assessments are those with phonemic awareness, which has been shown through various research reports, to be directly related to early reading abilities.

Torgesen (1998) discussed four effective preventative elements when working with students who may be at risk for reading failure. The first was the right kind and quality of instruction (p.3). This entails providing structured, systematic and explicit instruction with phonemic awareness, in ways that are meaningful to the student in both reading and writing. The second element was that the lesson should be delivered with the right level of intensity depending on the needs of the students (p.3). Some students may need more intensive lessons directly from the teacher one on one or even small groups. The third and fourth elements, the right children and at the right time, are considered together because it helps to focus on children who are most in need to more preventative instruction, mainly very early in the process of teaching students to read (p 3-4).

Torgesen (1998) states that most tests are given during the first semester of Kindergarten. Because this is the first assessment that most of these students have undergone, he stated that assessments would probably reveal more accurate scores if testing is administered once the child has been in school for a while, typically the second semester of Kindergarten (p. 4). He offers various phonological assessments used as early identification tool to measure phonemic awareness in students. One highly researched and used assessment mentioned was the Yopp-Singer Test of Phonemic Segmentation, created in 1995. The test was created for students in Kindergarten and works to identify student who are weak in their phonemic awareness skills (Torgesen, p. 5).

Yopp (1995) stresses the correlation between developing phonemic awareness in young children as determined by assessments like The Yopp-Singer Phoneme Segmentation Test and the later success children have in reading and spelling abilities. The Yopp-Singer Phoneme Segmentation Test contained 22 items that were selected based on predicted word familiarity among kindergarten students. The test would take 5 to 10 minutes per student to administer. Teachers provide directions to the students that they were to tell each sound in words they were presented. For example, if given the word old, they would say the individual sounds */o/ /l/ /d/*. Students were also provided with positive encouraging feedback if they answered correctly or given the correct answer if they missed sounds. Their scores consist of the number of items correctly segmented for the given word. Credit cannot be given to part of the word segmented and the student must say the sounds or phonemes in the word and not the letters. If this occurs, the item is marked incorrect and should be noted on the test.

Yopp (1995) reported that students who were able to segment all or most of the items on The Yopp-Singer Phoneme Segmentation Test and obtained high scores may be considered students who are phonemically aware. Students who were able to segment some of the words and scored in the middle range are emerging as phonemically aware. Students who were only able to segment a few, if any, words on the test and obtained low scores were considered to be lacking phonemic awareness and would need to obtain intervention or one on one intensive instruction and could possibly experience later difficulty with reading and spelling abilities.

The performance of students given the Yopp Singer test was predictive of the performance of reading and spelling that they gave in later grades (Yopp, 1995). The Yopp-Singer assessment allows teachers time to reach students who will need interventions early before leaving Kindergarten and hopefully produce results that show progress and bridge any gaps students may later have with reading and spelling.

Torgesen (1998) presented a lot of valuable information to assist in understanding the importance of identifying students who are at risk for reading failure very early in order to provide the proper supports to help them work on these challenges. It is important to continue to use these assessments to monitor the growth of students who struggle with applying phonetic strategies as they begin to read eventually write. Some students, who may struggle when they first begin school and don't receive this help, will continue to struggle and could even develop negative feelings about reading. Therefore, it becomes important that to reach these students as early as possible and begin to take those corrective steps to close the gap between poor readers and those who are more phonemically aware and ready to begin reading.

Dowler (2006) also conducted a study to determine if implementing phonemic awareness activities with at risk Kindergarten students would improve early literacy skills in these students (5). Six students were chosen from Dowler's kindergarten classroom and represented diverse socioeconomic and racial backgrounds from the classroom. They were chosen to participate in the study after test scores from the Dynamic Indicator of Basic Early Literacy Skills

(D.I.B.E.L.S.) showed that they were behind other peers in the classroom academically (Dowler, 2006). The study was conducted for one month and the students received intervention instruction from the researcher, meeting 4 times a week to participate in eight different activities 20-30 minutes each time they met (p. 18). Students received interventions in the areas of 1) initial sound fluency, which is identifying beginning sounds in words using pictures, 2) letter naming fluency, consisting of identifying letters, and 3) phoneme segmentation fluency, which is segmenting individual sounds in words (p. 22). These areas were identified as needing attention from the DIBELS assessment performed to identify areas of concern in phonemic awareness.

Dowler (2006) looked into whether working with a small group of at-risk students in her classroom on phonemic awareness would increase their ability to recognize letters and sounds with the ultimate goal of enhancing their early literacy skills. Dowler (2006) used several different phonemic awareness activities with the small group. The researcher gathered baseline data when she assessed her students before the intervention took place using the letter recognition assessment, sound recognition assessment and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS: Good & Kaminski, 2001) assessment. After the month of intervention services, students received the same assessments to determine growth in these areas after using the phonemic awareness activities in the small group setting (Dowler, 2006).

Dowler (2006) was able to make conclusions that the use of intervention with at risk students was beneficial in increasing their knowledge of basic early literacy skills (p.29). Letter and sound recognition improved for all six students, however only 5 out of the 6 kids made consistent progress with letter naming and initial sound fluency (p.32). Three students' were able to improve their scores in the area of phoneme segmentation (p.36-37). It appeared to be beneficial for students to work in smaller groups where they could learn and be supportive of one another and gain confidence in their abilities to figure out and understand correct answers. The researcher felt some of the reasons for lower scores were due to guessing behaviors, distractions and lack of a longer period of time to work with those students who were most at risk (Dowler, 2006). A great recommendation would be to continue this intervention for a longer period of time and beyond kindergarten to see if students continue to improve early literacy skills with phonemic awareness instruction. Because of the increased scores via posttest, this intervention would be beneficial to use with future students who struggled with early literacy skills.

There are many factors that lead to poor reading skills in students. Issues like lower socio-economic status, negative attitudes toward reading, reduced opportunities for vocabulary growth or the development of reading comprehension strategies can all lead to missed opportunities to develop early literacy skills and later successful readers. I think these are very important factors to take into account as we assess students in their abilities and begin to make predictions on later reading success. Looking closely at scores given to students identified as at risk for later reading failure, but also outside contributing factors can help to determine an effective program to assist students become successful readers. The background knowledge of students' reading abilities and interests would be a great start for teachers to gain insight into the literacy habits of the students and make significant changes that will be beneficial for their overall and later success in reading.

The Effectiveness of Phonemic Awareness Instruction

Students who show early signs of struggling with phonics and phonemic awareness early in school, usually Kindergarten, will need to receive intervention services in order to prevent a huge gap in reading abilities. If the needs of these students are not addressed early, it becomes

increasingly more difficult as the years progress to make gains in their reading abilities. The National Information Center for Children and Youth with Disabilities (2008) have conducted studies regarding tests developed to assesses phonemic awareness, phonics and an awareness to the concepts of print. They report that these assessments can account for 85% of children who will struggle with reading, usually beginning in Kindergarten. However, 90-95% of students who are identified as reading impaired can overcome these difficulties if they are provided with engaging opportunities to increase their awareness of sounds and its relations to letters (National Information Center for Children and Youth with Disabilities, 2008).

Dobbs (2005) conducted a study to determine the effectiveness of phonological awareness instruction on beginning readers. The study looked closely at phonemic awareness, because it is a subset skill of phonological awareness, and its impact on students who are beginning and those who struggle to read (pg. 6). The study sought to answer four specific questions; 1) What effect does phonological awareness have on the beginning reader?, 2) does a difference exist between male and female abilities in acquiring phonological awareness skills?,3) is there a difference between student's scores before phonological awareness skills are taught and after students have undergone phonological awareness training?, and 4) is there a correlation between a child's socio-economic background and their ability to acquire phonological skills (Dobbs, 2005)?

This quantitative study, Dobbs (2005) originally looked at a sample of 20 Kindergarten students from a particular Bloomington, IL classroom made up of children from various socio-economic backgrounds. By the end of the study, only 15 students remained due to lack of parental consent. In order to gather data, the Phonological Awareness Literacy Screening, the PALS-K, was used in November and again in April to assess the presence of basic literacy skills and whether students' scores had improved during this time period after they had received instruction in areas like rhyming, beginning sounds, recognition of letters, letter sounds and spelling (Dobbs, 2005). Student scores were summed together to compare grade level expectations for the Fall and Spring when students took the assessment (p.8). Students who scored below these expectations were provided with additional instruction in phonological awareness.

Dobbs (2005) reported that looking at a comparison of results on the PALS-K in the Fall and again in the Spring revealed growth with students overall. Students showed a positive impact on the improvement of beginning reading abilities after receiving instruction in phonological awareness and particular areas of weakness, though there were no significantly higher scores in any particular area as hypothesized at the start of the study. Although boys seemed to possess limited phonological awareness at the beginning of the school year, they tended to score higher than girls on assessments at the end of the year and showed the most overall growth. The results also showed that a gap still existed between students who were low income and scored low on the pretest in the Fall to when they took the test and were compared with other students in the Spring. The overall conclusion that Dobbs (2005) revealed was that students are capable of increasing early literacy skills and becoming confident beginning readers when training in phonemic awareness is combined with the regular language program involving reading and writing.

Hoover (2002) reported on several studies that have been conducted on the positive correlation between phonemic awareness and reading skills when tested in early elementary grades. He reports on studies that show distributions of high skills in phonemic awareness and either low or high scores in decoding, suggesting that it is possible to have phonemic awareness skills and be able to learn to decode, however, having phonemic awareness does not guarantee that students will naturally be able to decode words. This finding points out that although

phonemic awareness is important for learning to read, having an understanding of the alphabetic principle is important as well. Training studies have also suggested causal relationships that phonemic awareness instruction improves reading abilities, as well as reciprocal relationships that suggests that skills in phonemic awareness does support reading and vice versa.

The most important points to reflect on with these articles are the long term effects that students might suffer if their needs in reading are not addressed at an early age. The National Information Center for Children and Youth with Disabilities (2008) addressed the fact that boys often receive more referrals for intervention services, though girls struggle just as much, because they are more likely to misbehave as a result of not wanting to work or feeling uncomfortable about their lack of reading abilities. I have seen students in my classroom misbehave during critical work times and they are usually the children who struggle more academically and have poor assessment scores. I think the articles reviewed provide an opportunity to show how effective phonemic awareness instruction is as children are developing critical early literacy skills in preparation for reading. It thus becomes critical to begin providing students with experiences with those basic skills like manipulating sounds and their relationship with letters, words and print, which will help to build upon the knowledge they need to know to be successful in their future reading endeavors.

Methodology

Research conducted by the University of Oregon (2011) states that phonemic awareness is important because it helps students understand that letters in words represent sounds and provides a way for students to sound out and read new words (para.3). The purpose of this study was to examine the effectiveness of phonemic awareness instruction to the development of early literacy and reading abilities in Kindergarten children. The rationale for conducting this study was to look for ways to improve the reading abilities of Kindergarten students by using phonemic awareness programs that are effective and beneficial in accomplishing this goal. The research conducted with this study would benefit our instruction and enhance students learning as we seek to help our students develop early reading and literacy skills. We hope to increase the literacy skills of our students by addressing their individual needs with learning to read and create a strong basis for the future reading endeavors of our students as they progress through the grade levels.

Participants

This study was conducted at an elementary school in central Illinois. The approximate enrollment of students in this district is 13, 255, with more than 1,086 of that population being Kindergarten students. The majority of the students within the district are Caucasian, however, the diversity of students within the district, which include African Americans, Hispanics and Asian/Pacific Islanders, is representative of the population in which it serves. As shown on the School Report Card for 2011, 64% of the student body is Caucasian, 7.8% are African American, 4.3% are Hispanic, 18.5% are Asian, and 5.4% are Multiracial (Illinois School Report Card, 2011). The participants for this quantitative study were selected from the researchers Kindergarten classroom of 19 students. There are 11 girls and 8 boys enrolled in the class. The ethnic/racial background of the students 12 Caucasians, 2 African Americans, 2 Multiracial

students, 1 Hispanic student and 2 Asian/Pacific Islander students. Of the 19 students enrolled, only 18 students completed the assessments needed to participate in the study.

Instrumentation

There were several instruments that were used to monitor growth of early literacy skills among the Kindergarten students after receiving phonemic awareness instruction. Students took the Measures of Academic Progress or the MAP test. During the first two weeks of September all students in grades K-9 participated in the computerized MAP test. They took the second MAP assessment in December. The MAP tests measured academic growth throughout the school year and from year to year in the areas of reading and mathematics. The MAP tests are unique in that they adapt to be appropriate for the students level of learning. For the purpose of this study, only reading scores were obtained and used for measurement of growth in early literacy abilities. Reading scores from the September and December benchmarks were collected and compared for this study. MAP test scores are computer based and are password protected in order to gain access to them.

Students reading levels were assessed using the Irene Fountas and Gay Su Pinnell leveling benchmark system in September and then again in December to measure growth. Teachers are able to use an assortment of books with the benchmark system to determine a students' current independent or instructional reading level. Running records were used to record the results.

A letter was sent home to all participants' parents asking for their consent to allow their researchers to use their child's test score for this study. The researchers sent letters home with students explaining the study and the purpose for conducting it. Parents and students were asked to sign letters of consent and assent for the participation and approval of using students' scores for the purpose of this study. Each parent and child was informed that there would be no penalties for not participating. The family was told they were free to change their mind at any time and no consequences would be given to the family or student. All students' names will remain anonymous in this study.

Procedure

For the purposes of this study, a quantitative action research design was used. This action research approach allowed me to learn about and thus improve the effectiveness of my instruction in phonemic awareness to better assist my students develop early reading skills. In addition to the regular language arts program used in our classroom, which is through the Harcourt Series, a separate phonemic awareness curriculum is used in my Kindergarten classroom. It was created by Michael Heggerty and is entitled Phonemic Awareness: The Skills they need to help them Succeed (Heggerty, 2005). It is a program that was created specifically for Kindergarten classrooms and is taught as explicit, whole group instruction (Heggerty, 2005). Michael Heggerty created a 35 week phonemic awareness program for Pre-K through 3rd grade, with manuals for children who are also learning to read in Spanish. Kindergarten teachers are able to use Heggerty's lessons created specifically for Kindergarten students in their classrooms to focus on the integration of phonics and phonemic awareness. These lessons allow children to learn and stay engaged in the lesson through language play. The lessons are quickly paced and should be interruption free. Once the students know and are able to understand the routine, the lesson takes no more than 10-12 minutes to complete per day.

The phonemic awareness instruction book had lessons that consist of two pages containing instruction for an entire week. Teachers begin lessons in the first few weeks of instruction by having their students review letters and identify their sounds as part of the first skill review. Heggerty states that hearing and being able to play with language is very important, so there are also opportunities to practice nursery rhymes of the teachers choosing (Heggerty, 2005). Another fun way to engage the students is by reading books that play on words, like Dr. Seuss', Hop on Pop (Seuss, 1963). This book uses rhymes to play on words and engages the students in fun ways to listen for rhyming words as they develop phonics skills. There are various activities, both auditory and visual, that teachers can use as a resource when teaching and/or reviewing letters with the class to keep them engaged. Students may have to sing the alphabet song backwards, look at a letter pack, do a letter cheer or say the letters in a funny voice.

Students are then asked to repeat the rhyming words from a list of three words said for the second skill. This skill can be done with nonsense words, or words that are not real and students have to think of a word from a certain category that would rhyme. For example, the teacher would state, "*from this word set, tell me which two words rhyme- Bill, Jill, Don*". For the nonsense word example, the teacher would state, "*think about something that grows; give me something that rhymes with vlants*" (plants). Students could then raise their hand and provide the answer. Kurtz (2008) states that the use of nonsense words when training students in phonemic awareness is beneficial because it allows the student to focus more on the sounds and rhyming, rather than the meaning of words or how to spell them because they may be familiar with the word (para. 1 & 2).

The next skill reviews onset fluency, where the teacher has to say a word and students must repeat and isolate the onset or the beginning phoneme of the word. For example, in the word dig the /d/ would be the onset. This skill can be done by the teacher overemphasizing the onset of words and the students would have to repeat the word and say the beginning sound. The next and one of the most critical skills for phonemic awareness is blending. The teacher would say a word that has two syllables in it, pausing to emphasize the two sounds within it. Students then have to repeat the distinct sounds and say what the whole word would be when combined. In order to sustain their attention to the activity, students are asked to use hand movements to show the different sounds, then use their hands "smash" the words together to make a whole word. This activity prepares them for later activities when they must listen to individual phonemes, blend the sounds together and repeat what the whole word would be.

Another skill is identifying final and medial sounds by having students use hand motions like "punching out" the ending and middle sounds or digraphs or using their hands as a roller coaster to show the parts of three phonemes or sound in words. Students will also work on another important skill, segmenting, and learn to "chop" words using their hands in a chopping motion to separately segment or split up the individual phonemes in a word. Substituting sounds in words is also another skill, where students are asked to substitute a different letter sound in a word and say the name of the new word. For example, the teacher would say "Change the */h/* in ham to */j/*. What is the new word?" Students then say *jam*. They practice adding sounds when given –ab and asked to add /k/ to the beginning, students can give the new word *cab*. Deleting sounds is given the word *got*, students can delete the begging sound and tell you that the word left is *–ot*. The final skill ends with language awareness where students have to segment and count words in sentences.

Students engaged in this lesson daily from the second full week at the start of the school year and they will continue with it until the end of the 36 weeks covered in the book. The researchers were able to observe progress based on participation level and individual responses

when called on to answer questions. If students struggled with answers, they were given close instruction in a smaller group of students who struggled with the same skill.

Research Question

For the purpose of this study, the following question was investigated: Can struggling students show growth and close the academic gap with those students who enter Kindergarten and are strong in phonemic awareness in their progression towards early literacy and reading abilities by receiving direct phonemic awareness instruction in small and large groups?

Definition of Terms

Benchmark: a standard against which to measure something. The students' benchmark labels range from academic warning, below standards, meets standards and exceeds standards as it relates to students' performance with the Illinois Common Core standards in reading, based on a range of scores from their MAP assessment.

- **Academic Warning**- represents concern and students who are at risk of low achievement in early literacy skills, students who fall in this area are projected to fall below the most basic proficiency level on state assessments and who did not make typical growth. The MAP cut scores for the Fall show academic warning range from 0-125. In the Winter, the score range is 0-132.
- **Below Standards**- represents caution and students who represent some risk of lower abilities in early literacy skills, as these students met only one of the success conditions. The MAP cut scores for the Fall show below standards with scores ranging from 126-140. In the Winter, the score range is 133-147.
- **Meeting Standards**- students who have met success conditions and made typical growth. The MAP cut scores for the Fall show students who meet standards are in the range of scores from 141-156. In the Winter, the score range is 148-165.
- **Exceeding Standards-** represents exceeding typical growth, students who fall in this area show the probability that the student will exceed the most basic proficiency level. The MAP cut scores for the Fall show students who are exceeding standards are in the range of scores from 157-350. In the Winter, the score range is 166-350.

Early Literacy Skills: ability to recognize, use, and state the letters and sounds of the alphabet in the early stages of reading and writing.

Initial Sound Fluency: measured the students' ability to recognize and state the initial sounds in a word.

Fountas & Pinnell Benchmark Assessment System: (F&P) includes a set of texts that are used to measure and identify a student's current reading level, both independent and instructional, over time. Reading levels extend from <A at the lowest level to Z at the highest level.

Kindergarten- a word coined by educational pioneer, Friedrich Frobel in the 1800's, is a German word, meaning children's garden. Children are eligible for Kindergarten if they will be 5 years old on or before September 1st. Our school district is a full-day instruction program.

MAP: (Measures of Academic Progress) adaptive assessments in reading and math for primary students to determine readiness for reading and math instruction. The assessment is aligned with the state's academic standards. MAP helps to tailor/modify lessons and plan for more individualized instruction of students' needs.

Phoneme: the smallest unit of sound (for example the word cat starts with the */k/* sound*)*.

Phonemic awareness: awareness that the spoken words are made up of sounds and the ability to manipulate sounds in communication; having the ability to know that different sounds make up words and speech.

Phoneme Segmentation Fluency: measured the students' ability to hear and segment individual sounds in a word.

Phonics: an understanding of the relationship of printed letters and spoken sounds.

RIT: (Rasch Unit) scale to measure student achievement and student growth. It is an equal-interval score, like feet and inches, so scores can be added together to calculate accurate class or school averages In looking at RIT scores, the educational growth of a student can be followed from year to year.

Segmentation: separating words into their individual phonemes.

Standards: Standards are statements, developed by states or districts that relate to what students should know and be able to do as it relates to specific academic areas.

Limitations of Study

There are a few limitations to this study. One issue is that the sample size is relatively small. For this study, I only used students from my classroom, which includes a total of 19 students. Since a larger sample size was not used from throughout the school or even the school district to research the effectiveness of this phonemic awareness program, the results may not be relevant to the entire population of kindergarten students within the school or the school district. Another factor that could have limited this study was the fact that the MAP test was performed on the computer without the guidance of any teacher/actual person. Because the assessment was taken in September, it was the first computer based assessment that these kindergarten students had performed, so their interpretation of the questions and answers expected has its limits.

Students entered my classroom in August with a variety of experiences that have an effect on their growth throughout the year. The support or lack thereof that students receive from parents or guardians has a lasting effect on a child's academic and behavioral progress throughout the school year. Therefore, another important limitation would involve the outside influences or extra help that students did or did not receive outside of the classroom that would assist in their growth throughout the year, in addition to my direct instruction. The final limitation would be the length of time the study was conducted. Although MAP test scores and F&P reading levels are only observed for students for a length of 5 months for the purpose of the study, research involving the span of the full school year, as well as the following year, would assist in showing whether growth is consistent across the grade levels as students work to improve their reading abilities.

Data Analysis

The results are displayed to show growth between the first MAP assessment in September and the second MAP assessment in December. There are four tables, from the September and

December assessments, used to compare the growth with individual students by looking at the percentages of growth for each benchmark label. The researchers was able to look at the RIT scores from the MAP assessments and compare benchmark growth from the Fall and Winter, as well as the growth of students in their reading level using the F&P reading system.

Results

The results of the students who completed the study are the focus of this section of our research. The overall purpose of the study was to examine the effectiveness of phonemic awareness instruction to the development of early literacy and reading abilities in Kindergarten children. The rationale for conducting this study was to find ways to improve the reading abilities of Kindergarten students by using phonemic awareness programs that are effective and beneficial in accomplishing this goal. The research conducted with these students looked to answer the following question: Can struggling students show growth and close the academic gap with those students who enter Kindergarten and are strong in phonemic awareness as they progress towards early literacy and reading abilities by receiving direct phonemic awareness instruction in small and large groups?

Instructional Treatment

Students were given phonemic awareness instruction daily for 17 weeks, which includes the beginning of the school year in August to the third week in December when they took the second MAP test. Students who struggled with independently answering questions or participation based on the researchers' observations during the whole group lesson, were given individual or small group instruction with phonemic awareness instruction, which included beginning and ending sounds, rhyming, blending and segmenting sounds in words. There were three students who struggled and were therefore put into small groups to work with the researchers three times a week for a total of 15 minutes each day. Students took the computerized Measures of Academic Progress or the MAP test in September and again in December to measure growth in early literacy skill areas like phonological/phonemic awareness, phonics, concepts of print, vocabulary, comprehension and writing. The researchers assessed each student to determine their independent reading level through the F&P leveling system. The students were then put into small groups of students who read at their same independent level to work on reading strategies through the instructional guidance of the researchers.

After obtaining information from the MAP assessment and F&P scores, the researchers were able to put the data into a table to show percentages. The following tables show the overall academic progress made by students and the class as a whole in the researchers' Kindergarten class from the Fall to the Winter of the 2011-2012 school year.

Table 1 shows the percentages of students' Fall RIT scores for the MAP test that were in academic warning, below standards, meeting standards and exceeding benchmark range as it relates to Kindergarten standards with the preceding literacy skill areas. In looking at the RIT scores of students in September when they first took the test, the researchers were able to see what range the scores fell into and determine a benchmark label as to whether students were in warning, below, meeting or exceeding as it relates to the Illinois Common Core standards in reading. This label provided the researchers with percentages of where the class fit into each benchmark label. After completing the initial test in September, there were no students in

academic warning, 5 students were below standards, 7 students were meeting standards and 6 students were exceeding standards. For each of the benchmark label categories, Table 1 shows that the majority of students were either meeting (39%) or exceeding standards (33%) after first taking the MAP test in September. Based on the skills assessed with the test and the overall initial scores, the majority of students did enter Kindergarten with a strong sense of phonemic awareness and early literacy skills. It is important to note that this test was given to students participating in this research within the first full four weeks of school.

Table 1. The percentages of Fall RIT* scores for Kindergarten.

%Warning	%Below	%Meet	%Exceeds	Totals
0	28.0	39.0	33.0	100

*Footnote: RIT scale (Rasch unit). The RIT scale is an equal-interval scale much like feet and inches on a yardstick. It is used to chart the students' academic growth from year to year.

Table 2 shows the percentages of students' Winter RIT scores for the MAP test that looked at the same benchmark label ranges. Students took the second MAP test in December and RIT scores were recorded for each student. The test revealed that 1 student was in academic warning, 1 student was below standards, 15 students met standards and 1 student was exceeding. In looking at the scores from the second test, the majority of students were either meeting or exceeding standards, thus continuing to exhibit a strong understanding of phonemic awareness. The researchers were able to make comparisons of the progress of students from the September and December test scores to determine the rate of growth of students in the developing early literacy skill areas. This table shows the gains, by a rate of 17% from September to December, made by the class as a whole after receiving phonemic awareness instruction over the last three months.

Table 2. The percentages of Winter RIT scores for Kindergarten.

%Warning	%Below	%Meet	%Exceeds	Totals
5.5	5.5	83.5	5.5	100

Table three shows the F&P scores in September and again in December to compare the growth students make with their reading levels. The table shows the reading level that students start out at upon testing in the beginning of the year and what progress they have made in the three months since their first assessment. Table three represents information that was provided to the researchers that tells what the students' independent reading level is and where they can begin to provide instructional support as the student begins the process of developing early literacy skills and eventually, fluent reading. Students who are in the AA range are typically not ready for reading text and will need support with early literacy skills. The highest level that Kindergarten students are officially tested with the F&P system is G, though some students are able to read and provide comprehension of the text well beyond this level.

Table 3. Comparison of percentage of Fall and Winter F&P reading scores.

Fountas and Pinnell Reading Level	Fall Percent	Winter Percent
AA	17	5.5
A	72	22.2
B	11	50
C	0	5.5
D	0	16.7

Overall, the results show that 89% of students were able to maintain or improve their skills in phonemic awareness as they were given the Instructional treatment and retested in December in different literacy areas to assess their overall growth in the areas of phonological/phonemic awareness, phonics, concepts of print, vocabulary, comprehension and writing. In terms of showing growth in reading, by the Winter F&P benchmark, students are expected to show growth if they are reading at a B level or above. This direct instructional treatment given daily to students could also account for the overall improvement of scores shown in Table 3, reflecting that 72% of the class are meeting or exceeding those reading expectations, therefore showing overall growth from the previous scores taken for the Fall F&P benchmark. In looking at the results from these tables, the majority of students did enter Kindergarten with a strong basic understanding of phonemic awareness. Those students who struggled and had lower scores show a gradual improvement in closing the academic gap with those students who were strong in phonemic awareness as they progressed towards early literacy and reading abilities.

Discussion

In several articles reviewed by the researchers, authors have continually stressed the strong relationship between phonemic awareness and beginning reading and writing. As stated in the literature review section, students who enter Kindergarten with poor phonemic awareness or phonics skills tend to struggle with further developing skills in later grades and also tend to fall behind their peers academically. This study intended to find out if students would be able to show growth after coming in with weak phonemic awareness skills and being given direct instruction in these skills in the hopes of closing the academic gap from those who are stronger in these skills. Based on the tables above, the scores in all areas showed significant improvement in phonemic awareness and the ability of students to use what they have learned about phonemic awareness and the manipulation of sounds in order to assist with their reading abilities.

The results section showed that after taking the initial MAP test in the Fall, the majority of students did enter the researchers' classroom with strong skills in phonemic awareness. Of the five students who were below standards after taking the Fall MAP test, all of those students were able to improve their test scores for the Winter MAP test and meet standards according to the Illinois Common Core standards in reading. The entire class was provided with direct phonemic awareness instruction daily, but those students who struggled worked more closely with the researchers, three times a week, on specific deficit areas that were taught with the phonemic awareness lesson, like rhyming, letters and the manipulation of sounds with substitutions, omitting and segmentation. It appeared to be beneficial for these 5 students who were performing below standards according to the MAP test and classroom assessments, to work in smaller groups where they could learn and receive individual assistance from the researchers in specific areas of phonemic awareness. It also appeared to increase their confidence in their

abilities to figure out and understand correct answers. Although unable to make an exact determination, some of the reasons for lower scores from these students could be attributed to guessing behaviors because of a lack of an understanding of phonemic awareness and how letters and sounds work together, lack of exposure in the home environment or previous daycare/preschool setting and being distracted with having to use a computer at this early point in school to take such a structured test. The use of this intervention with these students, who could be considered at risk for later reading difficulties because of poor test scores, was proven to be beneficial in increasing their knowledge of basic early literacy skills as evidenced in the improvement of their MAP scores in December.

In looking at Table two for the Winter MAP test, the one student who appeared in academic warning and the one student that was below standards with the MAP test in December were not among the original five students who initially struggled in September. It was later determined that these two students had difficulties with being able to hear the questions due to problems with the computer they were using and thus were unable to correctly answer the questions. They were given follow up assessments that covered similar material as the MAP test and were able to pass all the questions.

What these results show is how phonemic awareness has assisted students in developing early literacy skills critical to reading success and overall fluency. Hoover (2002) defined reading as having an understating of the meaning of written language. It involves students having the ability to comprehend and decode printed words. Although students do not need to possess phonemic awareness in order to learn in general, it is a skill that is necessary to learn to read, especially languages that are alphabetic. This is necessary because in order to decode words, students must have an understanding of phonemes that are a part of the spoken word.

The reading benchmarks through Fountas and Pinnell state that by November, students would be meeting standards if they are reading at an A level text. Upon testing in September, Table three shows that there were 15 students who were reading at a level of A or higher. Only three students were below reading standards at the time of initial testing. This, however, was acceptable because Kindergarten students are not assessed for their reading abilities in our school district until November. Table three shows that more than 72% of students were reading at a level that either met or exceeded the benchmarks set for January that state students be reading at a B level or better to show that they were meeting reading standards.

Griffith and Olson (2004) concluded that it was important for students to establish phonemic awareness as early literacy, particularly early reading abilities developed, so that students were able to focus more on what they were reading and comprehending and not on how to read or sound out words. We believe this was a contributing factor to the success of students with developing and maintaining phonemic awareness skills and later to their reading abilities. Because of the consistent instruction that students received to improve their abilities with letters and sounds, they began to become more comfortable with reading and using strategies taught to figure out how to sound out words and make determine if their reading makes sense. Hoover (2002) provided a lot of useful information on what happens to children who do not gain phonemic awareness. Without possessing this skill, it becomes increasingly difficult to help students grasp the relationship of letters and spoken words, making it difficult to begin the process of beginning reading (Hoover, 2002). It becomes very crucial to help students develop phonemic awareness skills, especially at this young age, through print rich environments to assist students in understanding the relationship between letters and phonemes. Equally important is the fact that without assessing, observing and continually working with students who struggle before they enter 3rd grade, those students who are labeled as struggling later become at risk and

continue to lag behind their peers and further create a gap in their ability to become fluent readers versus their peers who are strong in these areas.

Overall, the results obtained through this study support what previous research has documented about the success of students who receive phonemic awareness as it relates to increasing early literacy skills and future reading abilities. Struggling students were able to show growth and close the academic gap with those students who entered Kindergarten strong in phonemic awareness as they progress towards early literacy and reading abilities by receiving direct phonemic awareness instruction in small and large groups. In addition to the regular language arts program, students were in an environment that consisted of direct phonemic awareness training in smaller groups to improve their abilities and enhance the skills their peers already possessed to acquire those early literacy skills needed for beginning reading.

Conclusion

Throughout this study and while analyzing the results from my students, we were able to gain a clear understanding of what phonemic awareness is and its overall benefits to our students as they later transitioned into becoming readers. It also helped to see the abilities our students possessed and the great gains they have made throughout the time this study was conducted. The purpose of this study was to determine if struggling students could show growth and close the academic gap with those students who enter Kindergarten and are strong in phonemic awareness as they progressed towards early literacy and reading abilities by receiving direct phonemic awareness instruction in small and large groups. Beyond this study, our overall focus for the year is to help our students to become successful readers by providing those critical tools that are necessary to even start the reading process and remain successful. This in turn would lead to building strong reading comprehension skills and fluency as they progress throughout the grade levels.

The Center for Teaching and Learning through the University of Oregon (2011) stated that there are five main areas that are important in the development of early literacy. Those five areas include phonemic awareness, alphabetic principle, accuracy and fluency with text, vocabulary and comprehension. The National Reading Panel, in their studies beginning in 1997, found that the best approach to reading was one that incorporates all these aspects in teaching, as well as assisting those children who struggle with learning to read. The panel reported that students who received direct phonemic awareness instruction were able to improve their reading skills more than those students who did not received phonemic awareness instruction (University of Oregon, 2011). This finding further proves how beneficial these skills are for young students to have and sustain in order to be successful readers.

This study proved to be beneficial because showed the effectiveness of phonemic awareness in assisting our students to develop early reading skills. Students participated in this phonemic awareness program on a daily basis, as well as the set language arts curriculum adapted for our school district and grade level and continued to make great progress in improving their scores and reading. Students who struggled at the beginning of the school year were able to improve their scores and close the gap amongst those who were already strong in phonemic awareness. Those students who struggled did need more support in order to gain those skills and will probably need consistent instructional help in order to continue their success and reading endeavors. The lessons in phonemic awareness were able to provide that foundation and pinpoint critical areas that would help them reach the next level of success.

Recommendations

While our study did prove that receiving phonemic awareness instruction is beneficial to students in improving their testing and reading scores, as well as helping to close the academic gap, a longer period of time to further research throughout the school year would be able to provide more information on the overall progress students make. The progress of students who struggled more at the beginning of the year could be followed more closely not only in their kindergarten year, but through 3rd grade to show what progress they make with taking MAP, as well as reading skills and comprehension abilities. Another thing to research and follow up with for a full year would be the number of students who have academic issues also struggled with behavior issues and the lack/support of parental involvement with learning to read outside of the school environment. Our plan is to share the information gathered from this research project with our Kindergarten team members to show the benefits of continuing the phonemic awareness program as part of our everyday curriculum, especially with students who struggle in this area upon first entering Kindergarten.

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